DIN 6701-3

ICS 45.040; 83.180

Together with
DIN 6701-2:2015-12,
supersedes
DIN 6701-2:2006-05

Adhesive bonding of railway vehicles and parts – Part 3: Guideline for construction design and verification of bonds on railway vehicles, English translation of DIN 6701-3:2015-12

Kleben von Schienenfahrzeugen und -fahrzeugteilen –
Teil 3: Leitfaden zur Konstruktion und Nachweisführung von Klebverbindungen im Schienenfahrzeugbau,
Englische Übersetzung von DIN 6701-3:2015-12

Collage des véhicules ferroviaires et ses composants –
Partie 3: Guide pour la construction et la vérification des joints collés dans la construction des véhicules ferroviaires,
Traduction anglaise de DIN 6701-3:2015-12

Document comprises 36 pages

DIN-Normenausschuss Fahrweg und Schienenfahrzeuge (FSF)
DIN-Sprachendienst

09.17 2512013

A comma is used as the decimal marker.

Contents

Figures

Tables

Foreword

This standard has been prepared by Working Group NA 087 00-12 AA *Werkstoffe, Füge- und Verbindungstechnik* of *DIN-Normenausschuss Fahrweg und Schienenfahrzeuge* (FSF) (DIN Standards Committee Railway).

Adhesive bonding is a process essential to the production of railway vehicles and their components. Railway vehicles within the meaning of this standard are defined in DIN 25003.

The DIN 6701 series of standards gives specifications relating to this process, which are based on the generic standards for adhesive bonding and take the requirements specifically relevant to rail vehicle construction into account.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. DIN [and/or DKE] shall not be held responsible for identifying any or all such patent rights.

DIN 6701 *Adhesive bonding of railway vehicles and parts* consists of the following parts:

— *Part 1: Basic terms, basic rules*

— *Part 2: Qualification of manufacturers of adhesive bonded materials*

— *Part 3: Guideline for construction, design and verification of bonds on railway vehicles*

— *Part 4: Manufacturing controls and quality assurance*

NOTE This standard does not establish specific design methods or reduction factors so as not to hinder developments for new design methods or new adhesives or to hamper innovations developed by rail vehicle manufacturers or operators and by adhesive manufacturers.

Amendments

This standard differs from DIN 6701-2:2006-05 as follows:

a) a classification of bonds has been included.

Previous edition

DIN 6701-2: 2006-05

1 Scope

This standard applies to the adhesive bonding and sealing of adherends in the manufacture and repair of railway vehicles ("rail vehicles", for short) and their components. The scope is as laid down in DIN 6701-2.

DIN 6701-3 describes the procedures to be followed in the design and verification of bonds made using metallic or non-metallic materials in the manufacture and repair of rail vehicles and their components.

The aim of the design, dimensioning and verification is to ensure proper bonding with due consideration being given to any effects arising from geometry, material and agents used.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DIN 6701-1, *Adhesive bonding of railway vehicles and parts — Part 1: Basic terms, basic rules*

DIN 6701-2:2015-11, *Adhesive bonding of railway vehicles and parts — Part 2: Qualification of manufacturers of adhesive bonded materials*

DIN 6701-4, *Adhesive bonding of railway vehicles and parts — Part 4: Manufacturing controls and quality assurance*

DIN 52451-1, *Testing of sealing in building construction — Part 1: Determination of change in mass and volume of self-levelling sealants after treatment at elevated temperature*

DIN 52612-2, *Testing of thermal insulating materials — Part 2: Determination of thermal conductivity by means of the guarded hotplate apparatus — Conversion of measured values for building applications*

DIN 53535, *Testing of rubber — General requirements for dynamic testing*

DIN 54456, *Testing of structural adhesives — Test of resistance to climatic conditions*

DIN 54457, *Structural adhesives — Testing of adhesively bonded joints — Bead peel test*

DIN 25003, *Railway applications — Classification of rail vehicles — Survey, terminology, definitions*

DIN 53504, *Testing of rubber — Determination of tensile strength at break, tensile stress at yield, elongation at break and stress values in a tensile test*

DIN 53598-1, *Statistical evaluation at off-hand samples with examples from testing of rubbers and plastics*

DIN 51045-1, *Determination of the thermal expansion of solids — Part 1: Basic rules*

DIN 54461, *Structural adhesives — Testing of adhesive bonds — Bending peel test*

DIN EN 1464, *Adhesives -— Determination of peel resistance of adhesive bonds — Floating roller method (ISO 4578:1990, modified)*

DIN EN 1967, *Structural adhesives — Evaluation of the effectiveness of surface treatment techniques for aluminium using a wet peel test in association with the floating roller method*

DIN EN 28510-1, *Adhesives — Peel test for a flexible-bonded-to-rigid test specimen assembly — Part 1: 90° peel*